

REMARKS

The present claims relate to a photo-curable adhesive sheet and a photo-curable transfer sheet.

Amendment summary

Upon entry of this Amendment, Claims 1-3, 5-9, and 25-29 will be pending.

Claim 1 is amended to recite that the photo-curable composition comprises a homopolymer or copolymer derived from alkyl acrylates and/or alkyl methacrylates. Support for this amendment is found, e.g., on page 38, lines 4-10 of the present specification.

Claim 3 is amended to remove a typographical error.

Claims 4, 10-24, and 30-31 are canceled.

Status of the claims

Claim 3 has been objected to, due to a typographical error. Claims 1-9 and 25-31 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Matsuoka et al. (JP 11-102542) in view of Takehana et al. (U.S. Patent No. 6,337,118) (hereinafter “Matsuoka” and “Takehana,” respectively). In addition, Claims 10-24 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ohki et al. (U.S. Patent No. 5,708,652) (hereinafter “Ohki”) in view of Takehana. Finally, Claims 1-24 have been provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-8 and 12-31 of copending Application No. 10/497,607 and further in view of Takehana.

Response to objection to Claim 3

Claim 3 has been objected to because the word “range” was misspelled. Claim 3 has been amended to correct this typographical error. Accordingly, the withdrawal of this claim objection is respectfully requested.

Response to rejection of Claims 1-9 and 25-31 under 35 U.S.C. § 103(a) based on Matsuoka in view of Takehana

Applicants respectfully submit that the presently claimed invention is not rendered obvious by Matsuoka or Takehana, either alone or in combination, because neither reference discloses a photo-curable composition comprising a homopolymer or copolymer derived from alkyl acrylates and/or alkyl methacrylates, as recited in the present claims.

As an initial matter, Applicants note that Claims 30-31 have been canceled by the present Amendment. Therefore, Applicants respectfully submit that the rejection of Claims 30-31 has been rendered moot, and respectfully request the withdrawal of the rejection of those claims.

Independent Claim 1 recites a photo-curable adhesive sheet comprising a photo-curable composition which comprises a homopolymer or copolymer derived from alkyl acrylates and/or alkyl methacrylates and having a photopolymerizable functional group and weight-average molecular weight of not less than 5,000 and which has a glass transition temperature of not more than 20°C. The photo-curable adhesive sheet has a light transmittance of not less than 70% in a wavelength range of 380 to 420 nm.

Independent Claim 25 recites a photo-curable transfer sheet comprising a photo-curable composition which comprises a homopolymer or copolymer derived from alkyl acrylates and /or alkyl methacrylates and having a photopolymerizable functional group and weight-average

molecular weight of not less than 5,000 and which is capable of deforming by application of pressure. In addition, at least one side of the photo-curable transfer sheet has a surface roughness (Ra) of not more than 30nm.

As described from page 59, line 18 to page 61, line 3 of the present specification, the presently recited reactive polymer contributes to a photo-curable adhesive sheet which has high transparency, when compared with conventional UV curable resin. In addition, the photo-curable adhesive sheet of the present invention has excellent dimensional stability because it has less cure shrinkage than a conventional UV-curable resin, and an optical information recording medium that is prepared using the adhesive sheet of the present invention does not suffer from deformation, such as warpage.

Applicants respectfully submit that, contrary to the position set forth in the Office Action, the combined teachings of Matsuoka and Takehana do not render obvious the presently claimed invention.

Matsuoka teaches a laminate consisting of a release sheet and a second release sheet which are bonded to each other with an adhesive sheet and used for preparing a disc. However, as noted in the Office Action, Matsuoka does not disclose or teach the presently recited adhesive sheet, nor does Matsuoka disclose or teach the manner in which to cure the adhesive, including light curing the adhesive.

Takehana teaches adhesive compositions for use in optical disks, which comprise a urethane (meth)acrylate A, a hydroxy(meth)acrylate B, and at least one photoinitiator C. The urethane (meth)acrylate A in Takehana is obtained based on polyaddition, for example, the reaction of a polyisocyanate compound with hydroxy(meth)acrylate, and further reaction with polyol (see, e.g., column 5, lines 33-48

of Takehana). Therefore, as discussed in more detail below, the urethane (meth)acrylate A is apparently distinct from the presently recited homopolymer or copolymer derived from alkyl acrylates and /or alkyl methacrylates based on addition condensation.

Applicants respectfully submit that the combined teachings of Takehana and Matsuoka does not render obvious the presently claimed invention because the presently recited reactive polymer is distinct from the adhesive disclosed in the references. The reactive polymer recited in the claims is a homopolymer or copolymer derived from alkyl acrylates and/or alkyl methacrylates, having a photopolymerizable functional group and weight-average molecular weight of not less than 5,000. The presently recited reactive polymer is, for example, prepared by addition condensation of (meth)alkyl acrylates, whereas the urethane (meth)acrylate A of Takehana are based on the polyaddition described above. Accordingly, Applicants respectfully submit that the adhesive in Takehana is structurally and chemically distinct from the presently recited reactive polymer.

In addition, Applicants respectfully note that Takehana does not disclose or teach a sheet-shaped adhesive.

In view of the above, Applicants respectfully submit that Matsuoka and Takehana, neither alone nor in combination, renders obvious the presently claimed invention. Accordingly, Applicants respectfully request that this § 103 rejection be reconsidered and withdrawn.

Response to rejection of Claims 10-24 under 35 U.S.C. § 103(a) based on Ohki in view of Takehana

Claims 10-24 are canceled by the present Amendment. Therefore, Applicants respectfully submit that this § 103 rejection has been rendered moot, and respectfully request the withdrawal of this rejection.

Response to provisional rejection of Claims 1-24 based on obviousness-type double patenting

Claims 1-24 have been provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-8 and 12-31 of copending Application No. 10/497,607 and further in view of Takehana.

Applicants submit herewith a Terminal Disclaimer naming co-pending Application No. 10/497,607, thereby obviating the provisional double patenting rejection. Applicants respectfully request the withdrawal of the double patenting rejection.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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